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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,320

06/02/2007

Akira Tsuboi

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4372 7590 09/29/2009  
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EXAMINER

DODD, RYAN P

ART UNIT

PAPER NUMBER

3655

NOTIFICATION DATE

DELIVERY MODE

09/29/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,320	<b>Applicant(s)</b> TSUBOI ET AL.	
	<b>Examiner</b> RYAN DODD	<b>Art Unit</b> 3655	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/31/2006</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Priority***

This application is a 371 of PCT/JP04/02737.

### ***Information Disclosure Statement***

The information disclosure statement filed on August 31, 2006 is being considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The present claim 1 requires certain oil channels perform the function of discharging oil from an inner peripheral side of a friction plate to an outer peripheral side

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of the friction plate while other channels located somewhat adjacent and parallel to the previously mentioned channels draw oil in from the outer peripheral side to the inner peripheral side. The present specification does not adequately describe how it would be possible for two substantially identical sets of oil channels locating adjacent to one another to perform two separate tasks.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In lines 2, 7 and 9 applicant claims a "plurality of oil channels 22", that respectively perform the different functions of discharging oil outward and drawing oil inward. It is unclear whether the channels of lines 7 and 9 are part of the channels of line 2, or separate channels.

Applicant also claims that a plurality of oil channels have discharge angle  $\alpha$  and inflow angle  $\beta$ . It is apparent from the Figure 2 that channels even directly adjacent to those channels designated with the angles  $\alpha$  and  $\beta$  will not have that same specific angle  $\alpha$  and  $\beta$  as measured relative to a line extending from the center of the friction plate 15. Applicant discloses that these channels are parallel to each other in each region A (see page 2, lines 26-27 of specification). It is inaccurate and therefore indefinite then to imply that all inflow channels, (whichever are the inflow channels), will

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have an angle  $\alpha$ , and that all discharge channels will have angle  $\beta$ , as measured from the center of the friction plate.

In addition, applicant claims that the channels of lines 7 and 9 "are mixed at substantially equal intervals." Because the only criteria for determining whether a channel is designated as an inflow or outflow channel are the angles  $\alpha$  and  $\beta$ , and these this criteria is indefinite (see paragraph above), it is not possible to ascertain which channels are inflow channels and which channels are outflow channels. It is therefore uncertain if they are mixed at substantially equal intervals, and indefinite. The phrase "Equal intervals" by itself could also pose problems of definiteness.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1 and 2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Voegelé 4967893 (henceforth Voegelé '893). Voegelé '893 discloses a wet clutch friction plate comprising a core plate (support plate) and a friction material (friction lining 22) bonded to a side face of the core plate, a plurality of oil channels (grooves 26) being formed in the friction material so as to provide communication

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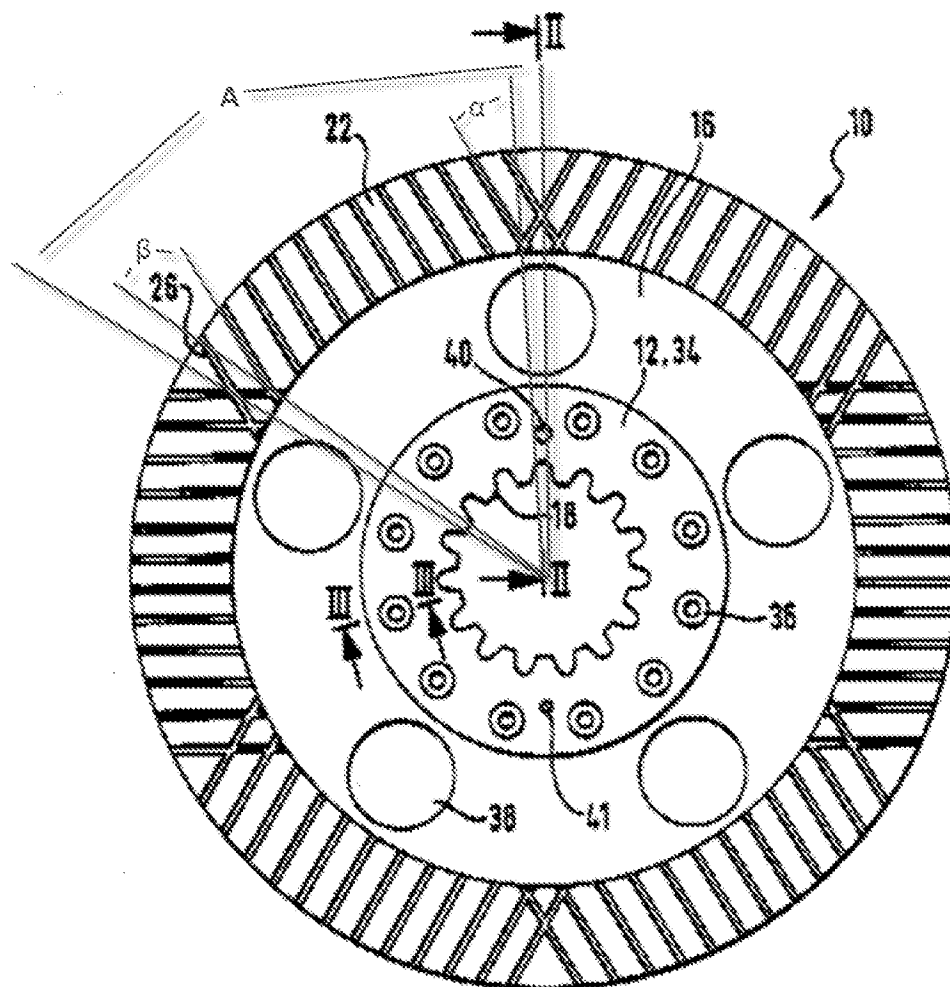
between inner and outer peripheral edges of the friction material (21), characterized in that a plurality of oil channels having a discharge angle ( $\beta$ ) that discharge oil from an inner peripheral side to an outer peripheral side of the friction plate (15) when the friction plate rotates and a plurality of oil channels having an inflow angle ( $\alpha$ ) that draw oil in from the outer peripheral side to the inner peripheral side of the friction plate (15) are mixed at substantially equal intervals (See figure below).

**U.S. Patent**

**Nov. 6, 1990**

**Sheet 1 of 3**

**4,967,891**



**Fig. 1**

Vogele '893 likewise discloses that the friction plate is divided into a plurality of regions (A) arranged in the peripheral direction, a plurality of oil channels parallel to each other are formed in the friction material of each region (A), and one oil channel

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and another oil channel (22) that are positioned at opposite end parts in the peripheral direction of each region (A) are given the discharge angle ( $\beta$ ) and the inflow angle ( $\alpha$ ) respectively.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eltze 4396100 discloses a plurality of parallel grooves within circumferential sections of the friction plate. Han et al. demonstrates that you may select from different plate designs for various applications and in fact use more than one design in a given clutch assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN DODD whose telephone number is (571)270-1161. The examiner can normally be reached on Monday thru Friday, 9:00A-6:30P, with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Le can be reached on (571)272-7092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ryan Dodd/  
Examiner AU 3655

/David D. Le/  
Primary Examiner, Art Unit 3655  
09/23/2009